

1. In a computing system that includes one or more processors, and a system memory, wherein the computing system is capable of using the one or more processors to instantiate in the system memory an instance of an application program and a system consistency management module, a method for the system consistency management module to selectively performing consistency checking, the method comprising the following

an act of identifying a plurality of data fields of state information corresponding to the instance that are to be subject to consistency checking, the plurality of data fields representing less than all of the state information corresponding to the instance;

an act of identifying an event that will prompt the consistency checking;

an act of determining that the event has occurred; and

in response to determining that the event has occurred, an act of performing the consistency checking on the plurality of data fields.

2. A method in accordance with Claim 1, further comprising the following:

an act of determining that the plurality of data fields contains at least one inconsistency identified during the consistency checking performance; and

in response to the determination that the plurality of data fields contains at least one inconsistency comprises an act of setting the state information of the instance to reflect that the instance is in recovery mode.

3. A method in accordance with Claim 2, wherein the act of determining that the plurality of fields contains at least one inconsistency comprises the following:

an act of generating one or more cyclic redundancy checking values corresponding to the plurality of data fields;

an act of comparing the one or more generated cyclic redundancy checking values to one or more stored cyclic redundancy checking values corresponding to the plurality of data field; and

an act of determining that there is at least one cyclic redundancy checking value that does not match.

4. A method in accordance with Claim 1, wherein the act of identifying a plurality of data fields of state information corresponding to the instance that are to be subject to consistency checking comprises the following:

an act of receiving a function call using an Application Program Interface from the instance, the function call identifying at least implicitly the plurality of data fields.

5. A method in accordance with Claim 4, wherein the act of receiving a function call using an Application Program Interface comprises the following:

an act of receiving the function call via one or more intermediary modules.

6. A method in accordance with Claim 5, wherein the act of receiving the function call via one or more intermediary modules comprises the following:

an act of receiving the function call after some restructuring the function call to conform with the Application Program Interface.

7. A method in accordance with Claim 4, wherein the act of identifying an event that will prompt the consistency checking comprises the following:

an act of receiving a function call using the Application Program Interface from the instance, the function call identifying at least implicitly the event.

8. A method in accordance with Claim 7, wherein the act of receiving a function call using an Application Program Interface comprises the following:

an act of receiving the function call via one or more intermediary modules.

9. A method in accordance with Claim 8, wherein the act of receiving the function call via one or more intermediary modules comprises the following:

an act of receiving the function call after some restructuring the function call to conform with the Application Program Interface.

10. A method in accordance with Claim 7, wherein the function call identifying the plurality of data fields and the function call identifying the event is the same function call.

11. A method in accordance with Claim 1, wherein the act of identifying an event that will prompt the consistency checking comprises the following:

an act of receiving a function call using the Application Program Interface from the instance, the function call identifying at least implicitly the event.

12. A method in accordance with Claim 1, wherein the event is the loading of the state information for the instance from persistent media to system memory.

13. A method in accordance with Claim 1, wherein the event is the saving of the state information for the instance to the persistent media.

14. A method in accordance with Claim 1, wherein the event is the backing up of the state information.

15. A method in accordance with Claim 1, wherein the event is the occurrence of a specific time.

16. A method in accordance with Claim 1, wherein the event is the passage of a specific amount of time since consistency checking was last performed.

17. A computer program product for use in a computing system that includes one or more processors, and a system memory, wherein the computing system is capable of using the one or more processors to instantiate in the system memory an instance of an application program and a system consistency management module, the computer program product for performing a method for the system consistency management module to perform selective consistency checking, the computer program product comprising one or more computer-readable media having thereon computer-executable instructions that, when executed by the one or more processors, cause the computing system to perform the following:

an act of identifying a plurality of data fields of state information corresponding to the instance that are to be subject to consistency checking, the plurality of data fields representing less than all of the state information corresponding to the instance;

an act of identifying an event that will prompt the consistency checking;

an act of determining that the event has occurred; and

in response to determining that the event has occurred, an act of performing the consistency checking on the plurality of data fields.

18. A computer program product in accordance with Claim 17, wherein the one or more computer-readable media further have thereon computer-executable instructions that, when executed by the one or more processors, cause the computing system to further performing the following:

an act of determining that the plurality of data fields contains at least one inconsistency identified during the consistency checking performance; and

in response to the determination that the plurality of data fields contains at least one inconsistency comprises an act of setting the state information of the instance to reflect that the instance is in recovery mode.

19. A computer program product in accordance with Claim 18, wherein the computer-executable instructions for performing the act of determining that the plurality of fields contains at least one inconsistency comprise computer-executable instructions for performing the following:

an act of generating one or more cyclic redundancy checking values corresponding to the plurality of data fields;

an act of comparing the one or more generated cyclic redundancy checking values to one or more stored cyclic redundancy checking values corresponding to the plurality of data field; and

an act of determining that there is at least one cyclic redundancy checking value that does not match.

20. A computer program product in accordance with Claim 17, wherein the computer-executable instructions for performing the act of identifying a plurality of data fields of state information corresponding to the instance that are to be subject to consistency checking comprise computer-executable instructions for performing the following:

an act of receiving a function call using an Application Program Interface from the instance, the function call identifying at least implicitly the plurality of data fields.

21. A computer program product in accordance with Claim 17, wherein the computer-executable instructions for performing the act of identifying an event that will prompt the consistency checking comprise computer-executable instructions for performing the following:

an act of receiving a function call using the Application Program Interface from the instance, the function call identifying at least implicitly the event.

22. A computer program product in accordance with Claim 17, wherein the one or more computer-readable media comprise physical memory media.

23. A computer program product in accordance with Claim 22, wherein the physical memory media comprises persistent media.

24. A computer program product in accordance with Claim 22, wherein the physical memory media comprises system memory.

25. In a computing system that includes one or more processors, and a system memory, wherein the computing system is capable of using the one or more processors to instantiate in the system memory an instance of an application program and a system consistency management module, a method for the system consistency management module to performing consistency checking as specified by the instance of the application program, the method comprising the following

a step for determining that it is appropriate to perform consistency checking on a plurality of data fields, the plurality of data fields representing less than all of the state information corresponding to the instance;

in response to determining that the event has occurred, an act of performing the consistency checking on the plurality of data fields.

26. A method in accordance with Claim 25, wherein the step for determining that it is appropriate to perform consistency checking on a plurality of data fields comprises the following:

an act of identifying the plurality of data fields;

an act of identifying an event that will prompt the consistency checking; and

an act of determining that the event has occurred.

27. A method in accordance with Claim 26, wherein the event is the loading of the state information for the instance from persistent media to system memory.

28. A method in accordance with Claim 26, wherein the event is the saving of the state information for the instance to the persistent media.



29. A method in accordance with Claim 26, wherein the event is the backing up of the state information.

30. A method in accordance with Claim 26, wherein the event is the occurrence of a specific time.

31. A method in accordance with Claim 26, wherein the event is the passage of a specific amount of time since consistency checking was last performed.

32. In a computing system that includes one or more processors, and a system memory, wherein the computing system is capable of using the one or more processors to instantiate in the system memory an instance of an application program and a system consistency management module, a method for the instance to control whether or not the system consistency management module performs consistency checking, the method comprising the following:

an act of receiving a function call using an Application Program Interface from the instance, the function call indicating that the instance has found an inconsistency in a plurality of data field representing less than all of the state information corresponding to the instance; and

in response, an act of setting the state information of the instance to reflect that the instance is in recovery mode.

33. A method in accordance with Claim 32, wherein the function call is a first function call, the method further comprising the following:

an act of receiving a second function call using the Application Program Interface from the instance, the second function call requesting that the system consistency management module perform consistency checking on the plurality of data fields.

34. A method in accordance with Claim 33, further comprising the following:

an act of identifying an event that will prompt the consistency checking;

an act of determining that the event has occurred; and

in response to determining that the event has occurred, an act of performing the consistency checking on the plurality of data fields.

35. A computer program product of use in a computing system that includes one or more processors, and a system memory, wherein the computing system is capable of using the one or more processors to instantiate in the system memory an instance of an application program and a system consistency management module, the computer program product comprising one or more computer-readable media having thereon computer-executable instructions for performing a method for instance to control whether or not the system consistency management module performs consistency checking, the one or more computer-readable media having thereon computer-executable instructions that, when executed by the one or more processors, causes the system consistency management module to perform the following:

an act of receiving a function call using an Application Program Interface from the instance, the function call indicating that the instance has found an inconsistency in a plurality of data field representing less than all of the state information corresponding to the instance; and

in response, an act of setting the state information of the instance to reflect that the instance is in recovery mode.

36. A computer program product in accordance with Claim 35, wherein the function call is a first function call, and the one or more computer-readable media further have thereon computer-executable instructions that, when executed by the one or more processors, causes the computing system to further perform the following:

an act of receiving a second function call using the Application Program Interface from the instance, the second function call requesting that the system consistency management module perform consistency checking on the plurality of data fields.

37. A computer program product in accordance with Claim 35, wherein the one or more computer-readable media further have thereon computer-executable instructions that, when executed by the one or more processors, causes the computing system to further perform the following:

an act of identifying an event that will prompt the consistency checking;

an act of determining that the event has occurred; and

in response to determining that the event has occurred, an act of performing the consistency checking on the plurality of data fields.

38. A computer program product in accordance with Claim 35, wherein the one or more computer-readable media comprise physical memory media.

39. A computer program product in accordance with Claim 38, wherein the physical memory media comprises persistent media.

40. A computer program product in accordance with Claim 38, wherein the physical memory media comprises system memory.